

Claims

1. An electronic device for a mask container that is adopted to carry a lithography mask,
5 said electronic device comprising:
a receiver unit to receive first data;
a memory unit to temporarily store said first data;
a processor unit to process said first data and to provide second data; and
10 a transmitter unit to transmit said second data.
2. The electronic device of claim 1, wherein said mask container carries said lithography mask between a first station and a second station, said first station
15 using said lithography mask in a first process, said second station at a later time-point using said lithography mask in a second process, said first data being indicative on how said first station has used said lithography mask in said first process, and said
20 second data being indicative on how said second station uses said lithography mask in said second process.
3. The electronic device of claim 2, wherein said
25 transmitter unit transmits said second data to said second station before said second station uses said lithography mask in said second process.
4. The electronic device of claim 3, wherein said
30 processor unit processes said first data by combining said first data with an instruction.

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5. The electronic device of claim 4, wherein said instruction is indicative on how said lithography mask is used in said second process.
- 5 6. The electronic device of claim 4, wherein said receiver unit also receives said instruction.
7. The electronic device of claim 6, wherein said receiver unit receives said first data at a first time point and receives said instruction at a second time point that comes later.
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9. The electronic device of claim 1, wherein said receiver unit, said memory unit, said processor unit, and said transmitter unit are coupled by a bus.
- 5 10. The electronic device of claim 1, wherein said receiver unit and said transmitter unit are implemented as a transceiver unit.
11. The electronic device of claim 10, wherein said
10 transceiver unit is a wireless transceiver.
12. The electronic device of claim 11, wherein said wireless transceiver is a radio frequency transceiver.
- 15 13. The electronic device of claim 11, wherein said wireless transceiver is an infra-red transceiver.
14. The electronic device of claim 1, wherein said memory
20 unit is a non-volatile memory.
15. The electronic device of claim 14, wherein said non-volatile memory is an EEPROM.
16. The electronic device of claim 14, wherein said non-
25 volatile memory is an SRAM.
17. The electronic device of claim 1 comprising a power supply that is implemented by at least a component of the following group: battery, photovoltaic element,
30 thermal converter, and inductive power converter.
18. The electronic device of claim 1 that is permanently attached to said mask container by an adhesive.

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19. The electronic device of claim 1, wherein said processor unit and said memory unit are implemented on a single monolithic chip.
- 5 20. The electronic device of claim 1, wherein said transceiver communicates with a further electronic device at a further lithography mask container and with further stations.
- 10 21. The electronic device of claim 1, wherein for a further lithography mask carried in said mask container said second data is indicative on how a third station uses said further lithography mask a third process.
- 15 22. A method for operating a manufacturing system for semiconductor wafers, said manufacturing system employing a plurality of lithography masks that are carried in a plurality of mask containers, said method comprising the following steps:
- 20 exchanging data relating to a predetermined process between an electronic device attached to the mask container and a host computer system; and using a lithography mask in a station in said
- 25 predetermined process, wherein using comprises at least one step out of the group of the following steps:
- inserting said lithography mask into said container;
 - removing said lithography mask from said container;
 - 30 • in combination, inserting and removing multiple lithography masks to and from said container;
 - writing data to said lithography mask;
 - reading data from said lithography mask;

- [illegible]

23. The method of claim 22 wherein said step¹ exchanging
data comprises receiving data by said electronic
25 device, transmitting data from said electronic device,
and processing data by said electronic device.

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